FULLPRO
FULLER PROFESSIONAL

ChemKlenz™

IMMEDIATE SPILL RESPONSE

USER MANUAL

Pressurized Cylinders

Shaker Bottle

Bulk Pail

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INTRODUCTION

ChemKlenz is a proprietary formulation of non-toxic environmentally safe metal oxides effective for neutralizing a wide range of **toxic chemicals**. ChemKlenz is non-flammable, non-corrosive and can be safely applied to any liquid spill or vapor release enabling responders to utilize one product when faced with a wide variety of known or unknown chemical hazards. Since the dry powder absorbs all spills and is effective against both liquid and vapor hazards upon contact, on-site incident management and clean up times are reduced.

ChemKlenz is offered in pressurized cylinders capable of addressing both liquid and vapor hazards as well as manually dispersed containers for liquid hazard treatment.

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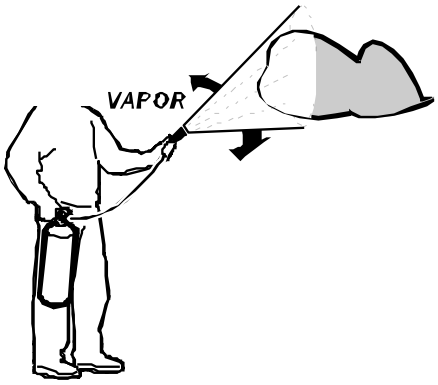
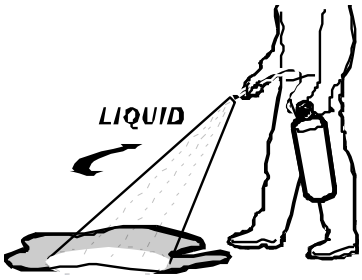
I. INSTRUCTIONS FOR USE AND APPLICATION

99010, 99020, 99040 (Pressurized Cylinders)

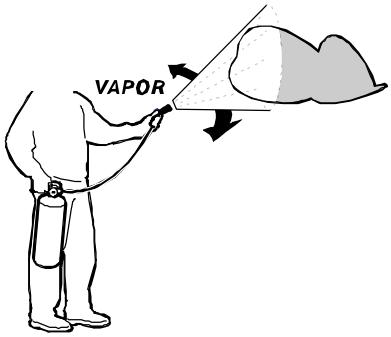
1. Pull ring pin.
2. Squeeze the lever and shake cylinder in up and down motion to ensure maximum clean-out.
3. For vapor hazard aim hose and mist all powder in direction of hazard.
4. For liquid hazard sweep hose side to side to ensure complete coverage of hazard.

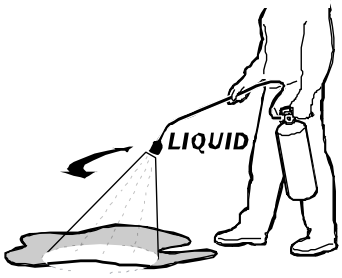




99040 (Large Pressurized Cylinder with an optional applicator wand)

1. Pull ring pin.
2. Squeeze the lever and shake cylinder in up and down motion to ensure maximum clean-out.
3. For vapor hazard ***detach applicator wand*** and aim hose in direction of hazard. Mist all powder into air in direction of hazard.
4. For liquid hazard sweep applicator wand side to side to ensure complete coverage of hazard.





99005 (Shaker Bottle for use with 99000 Wall Mount Unit)

1. Unscrew lid.

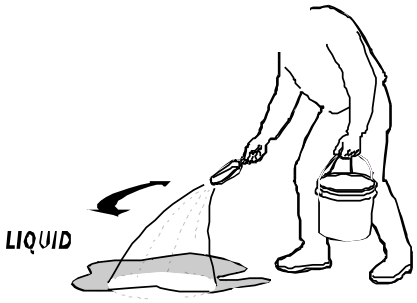
2. Apply powder forming a ring around the hazard and then shake the powder directly onto hazard to thoroughly cover the liquid.

3. Agitate powder to ensure all liquid has been adsorbed.

99050 (Bulk Pail)

1. Unscrew lid.

2. Apply powder forming a ring around the hazard and then scoop powder directly onto hazard to thoroughly cover the liquid.



3. Agitate powder to ensure all liquid has been adsorbed.

II. GUIDELINES FOR UNIT SIZE SELECTION

ChemKlenz neutralizes a broad range of acids including phosphoric, sulfuric, nitric hydrochloric and hydrofluoric. Using concentrations at which the acids are commonly transported, the amount of spill that can be neutralized using various ChemKlenz units is shown in Table 1.

Caution: Neutralization of acids and selected aqueous solutions generates heat.

Table 1: Guidelines for Maximum Acid Spill Sizes that can be Neutralized by Various ChemKlenz Units.

Type of Acid	*99005*	*99010*	*99020*	*99040*	*99050*
	Ounce	**Quart***	**Quart***	**Gallon**	**Gallon**
85% H_3PO_4	12	0.8	1.5	0.8	0.9
94% H_2SO_4	10	0.6	1.3	0.6	0.8
70%HNO_3	32	2.0	4.0	2.0	2.5
37% HCl	42	2.4	4.8	2.6	3.3
39% HF	22	1.4	2.7	1.4	1.7

* 1 Quart = 0.95 liter

ChemKlenz absorbs a wide range of organic compounds such as alcohols, aldehydes, chlorocarbons and petrochemicals. Table 2 gives recommendations for unit selection based on the spill size.

Table 2. Guidelines for Maximum Amount of Organic Spill that can be Absorbed by Various ChemKlenz Units

Type of Organic Spill	*99005*	*99010*	*99020*	*99040*	*99050*
	Ounce	**Quart***	**Quart***	**Gallon**	**Gallon**
Acetone	17	1.1	2.1	1.1	1.4
Alcohols	12	0.75	1.4	0.75	0.94
Chlorinated hydrocarbons	28	1.75	3.5	1.75	2.2
Petrochemicals	17	1.05	2.1	1.05	1.3

* 1 Quart = 0.95 liter

ChemKlenz effectively neutralizes or adsorbs acidic and caustic gases as well as oxidizers. Table 3 provides agent concentration in parts per million (ppm) that can be successfully treated (at least 95% reduction) in a 1,000 ft^3 room using various ChemKlenz units. The safety levels for immediate danger and time-weighted average, based on NIOSH, are given as a guide.

Table 3. Guidelines for Maximum Concentration (in parts per million) of Vapor Hazard that can be Successfully Treated with ChemKlenz Pressurized Cylinders in a 1,000 ft^3 room.

Type of Vapor	*Safety Levels (ppm)*		*ChemKlenz Unit*		
	Immediately Dangerous	**TWA* (8 hrs)**	*99010*	*99020*	*99040*
			ppm	**ppm**	**ppm**
Acidic					
Hydrogen chloride	50	5	865	1730	3460
Hydrogen sulfide	100	20	235	475	950
Sulfur dioxide	100	5	340	685	1370
Caustic					
Ammonia	300	20	215	430	860
Oxidizers					
Ethylene oxide	800	5	125	250	500
Chlorine	10	1	200	400	800

*TWA = Time Weighted Average

III. USER CAUTIONS AND WARNINGS

99010, 99020, 99040 (Pressurized Cylinders)
Do not incinerate. Contents under pressure. Tested to 585 psi (41.13 kg/cm). Do not expose to temperatures over 120°F (49°C). Suitable for use at temperatures from -40°C to 49°C. Improper or careless use may cause severe bodily injury or property damage. Read and thoroughly understand all directions for use before operating.

The unit is non-rechargeable. Partial discharge may cause extinguisher to leak.

Warning! Do not check the pressure or test the unit by spraying it.

99005 (Shaker Bottle), 99050 (Bulk Pail)
If the seal has been broken, discard product immediately. Prolonged exposure to the atmosphere will degrade product effectiveness. Close lid between uses. Read and thoroughly understand all directions for use before utilizing the product.

IV. MAINTENANCE AND STORAGE INSTRUCTIONS

99005 (Shaker Bottle) and 99050 (Bulk Pail)
Inspect the unit at least monthly. Check for signs of damage or misuse. Ensure that all text on the label is still readable. Store in a dry place.

99010, 99020 and 99040 (Pressurized Cylinders)
Inspect frequently (at least monthly) to determine that the hose is unobstructed, that the system is properly pressurized, and that the seal is intact. Examine the surface of the unit for corrosion. If you notice corrosion during the warranty period, return to Fuller Industries LLC (see the Limited Warranty section). Ensure that all text on the label is still readable.

V. DISPOSAL

A used unit needs to be fully discharged prior to disposal. Powder should be disposed of in accordance to local, state and federal regulations. For federal regulations follow 40 CFR 261, Subpart C "Characteristic Hazardous Wastes" and 40 CFR 261, Subpart D "Listed Hazardous Wastes".

VI. TROUBLESHOOTING

Symptom: The pointer on the ChemKlenz gauge is in the red.
Cause: The unit is over or under pressurized.
Solution: If the unit has not been used and is within the warranty, return to Fuller Industries LLC for replacement (see the next section). If the warranty has expired, completely discharge and discard the unit. Replace it with a new one immediately.

Symptom: The powder is not discharging from the pressurized cylinder.
Cause: The powder has settled.
Solution: Shake the cylinder several times in an up and down motion.

Caution! **The pressurized cylinder is a disposable, non-rechargeable unit. Do not try to service or repair the unit under any circumstances. Do not remove the nozzle or valve assembly.**

If the information you need is not covered in the questions and answers above, please call us at:
(800) 848-4901.

VII. LIMITED WARRANTY

Fuller Industries LLC warrants that for a period of one year from the date of purchase, this product will be free from manufacturing defects. Fuller Industries LLC, at its option will repair or replace the product or any component of the product found to have manufacturing defects during the warranty period. If the product is no longer available, replacement may be made with a similar product of equal or greater value.

This warranty is non-transferable and is valid from the date of the original purchase. Proof-of-purchase and/or your warranty registration card on file are required to obtain warranty performance. This warranty does not cover consequential damages and/or damages resulting from negligent use or misuse of the product by failure to store, maintain and/or use the product in accordance with label directions otherwise. In addition, disassembly, repair or modification by anyone other than Fuller Industries LLC, acts of God, such as fire, flood, hurricanes and tornados will not be covered. To be eligible for the warranty, the unit cannot be partially discharged.

To obtain a warranty service, contact Customer Service at (800) 848-4901 Monday through Friday, 8 am – 5 pm CST. To assist in serving you, please have the model number and date of purchase available when calling.